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Personality Impacts on Self-disclosure Behavior on Social Networking Sites

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ABSTRACT

This research-in-progress examines the impact personality has on self-disclosure behavior on Social Networking Sites (SNS). In particular, it looks at the ‘Big Five’ personality characteristics: Extraversion, Neuroticism, Openness to experience, Agreeableness, and Conscientiousness. A path analysis is performed using PLS to determine the weight each factors has on a person’s intention to disclose personal information on his or her SNS. Counter to previous research on SNS usage, this preliminary analysis indicates that all five factors are relevant in a person’s decision to divulge personal information on a SNS.

Keywords

Self-disclosure, personality, social networking.

INTRODUCTION

Over 65 percent of adult Internet users are part of Social Networking Sites (SNS), such as MySpace, Facebook, or LinkedIn (Madden and Zickuhr 2011). Only email and search engine usage top SNS usage (Purcell 2011). Social Network Sites are a key means by which people share and communicate information with family, friends, and colleagues. Millions of consumers visit these sites as a part of their daily routine in order to reconnect with friends, see new family photos, and to just generally keep in touch. They are defined as “websites in which consumers setup a personal or professional profile” (Boyd and Ellison 2007), which can be manipulated to be public or semi-public and often contains a list of users with which the consumer has connections. These connections can be shared with other users, and in return, the consumer can see other users’ lists of connections (Boyd and Ellison 2007).

Social networking sites are unique in that not only can consumers meet new people that were once strangers, but also extend their own personal social network online. With this openness comes the concern that the personal information divulged on these sites will be used for malevolent purposes, such as identity theft or cyberstalking. Previous studies have looked at personality and its impact on the use of SNS (Ross, Orr, Sisic, Arseneault, Simmering and Orr 2009), but none have looked specifically at its impact on self-disclosure of personal information on these sites. Determining the factors, such as personality, that impact a person’s decision to post personal information (self-disclose) on a SNS is key to understanding how consumers can be better educated to protect themselves from victimization.

This research-in-progress focuses on personality traits and their impacts on a person’s decision to self-disclose. In the following sections, we will describe the relevant literature on personality traits, along with intention to disclose. We will then present the methodology for collecting data and provide an analysis and discussion of the preliminary data collected. Finally, the current limitations and our future plans for data collection are presented.

LITERATURE REVIEW

According to Ryckman (Ryckman 2004), personality is comprised of a person's characteristics that uniquely influence his or her cognitions, affect, and behaviors in various situations. Personality has been shown to impact online communication interactions. For example, extraversion was found to be a significant predictor of cellphone usage. In fact, extraverts spent more time calling others and changing their ring tones and wallpapers than their introverted counterparts (Butt and Phillips 2008). In addition, extraverts are better able to harness the Internet to enhance their already existing social lives compared to introverts (Kraut, Kiesler, Boneva, Cummings, Helgeson and Crawford 2002).

The Big Five Factor (a.k.a. "Big Five") Model contains five major categories that together describe a person's personality. They are: Neuroticism, Extroversion, Openness to experience, Agreeableness, and Conscientiousness (McCrae and John 1992). Though the names of these categories differ from author to author, their meanings are consistent. *Neuroticism*, sometimes referred to as emotional stability, refers to a person's emotional stability. For example, a person whose mood is happy one moment and depressed another is considered unstable. Next, *extroversion* refers to those who are outgoing and like to be the center of attention in a group of people. *Openness to experience*, or intellect as it is also described, pertains to someone who is open to new experiences and willing to try new things. *Agreeableness* refers to how amiable and agreeable a person is. Agreeable people tend to avoid hostility and often agree to things simply to avoid conflict. Finally, *conscientiousness* is a characteristic that people possess who tend to be diligent and organized in their daily lives (Digman 1997).

Research has been conducted applying the Big Five to the topic of social networking. Neuroticism and extroversion were found to have a measureable impact on Facebook use (Ross et al. 2009). Those high in neuroticism used the wall component of Facebook a lot. This is believed to be because text can be as revealing or unrevealing as a person chooses it to be. Since text can be edited or deleted by the author, a neurotic person can spend as much or as little time as they please controlling what is posted. On the other hand, neurotic types do not post pictures very often. A picture can inadvertently reveal information that a neurotic personality type may not want to reveal, such as location, or emotional states.

Extraverts were found to belong to many more groups on Facebook than introverts. Their outgoing nature with people offline extended to being outgoing online in a social networking environment as well (Ross et al. 2009). In addition, the extrovert personality factor has the most significant impact on social networking use. Extroverted users tend to use social networking websites frequently. In their desire to grow an even larger network of friends and boost their image, extroverts employ online social networking (Correa, Hinsley and Gil de Zúñiga 2010). Further, extroverts tend to have more friends on Facebook than their introverted counterparts, who tend to be reserved and prefer to listen to a conversation rather than be at the center of it. The median amount of friends an extrovert had on Facebook was found to be 150, versus 103 for introvert. The explanation for this was that introverts, in order to compensate for the lack of self-image offline, tended to include much more information on their profile than extroverts do. Counter to intuition, introverts were found to disclose personal information which may be viewed as risky behavior to an extrovert. The explanation for this was that introverts try to create a desirable online personality, whereas extraverts do not need to promote themselves as much due to their social skills (Amichai-Hamburger and Vinitzky 2010; Zywicki and Danowski 2008).

The other 'Big Five' factors have been researched (Correa et al. 2010; Ross et al. 2009), but no conclusive evidence has shown a strong link between them (Openness to Experience, Agreeableness, and Conscientiousness) and SNS use or self-disclosure (Ross et al. 2009). This study focuses on personality and its influence on a person's decision to self-disclose. Specifically, we will be looking to see if the 'Big Five' personality characteristics have an impact on self-disclosure behavior on SNS.

We propose hypotheses for each of the 'Big Five'. First, since extraverts tend to be social and outgoing; it is thought that they would be more open to disclosing personal information on their SNS. Though Zywicki and Danowski (2008) found contrary results, these findings are counter intuitive and are worthy of further investigation. Thus,

H1: Extraversion will positively impact a person's intention to self-disclose on a social networking site.

Given the interpersonal skills and willingness to engage in meaningful relationships that agreeable people possess, it is predicted that,

H2: Agreeableness will positively impact a person's intention to self-disclose on a social networking site.

Though neurotics typically use the Internet to gain social support, it is thought that they may fear sharing too much information about themselves lest they be judged inadequate. Thus it is posited that:

H3: Neuroticism will negatively impact a person's intention to self-disclose on a social networking site.

Since people who are open enjoy new ideas and activities, it is predicted that:

H4: Openness to experience will positively impact a person's intention to self-disclose on a social networking site.

Those who are conscientious take pride in their organization and being detailed; therefore, it is thought that:

H5: Conscientiousness will positively impact a person's intention to self-disclose on a social networking site.

METHODOLOGY

Participants

Forty students at a Northeastern university participated in the preliminary data collection. The sample was comprised of 50% males, with an average age of 19.8 years ($SD = 1.68$). These figures are consistent with usage rates of SNS. Men and women tend to be equal in their usage of the SNS (Hampton, Goulet, Rainie and Purcell 2011). First, according to research reports, 18 to 29 year olds comprise a significant portion of the SNS market at 25% (Madden and Zickuhr 2011) and are the most frequent users of these sites with over 70% of them visiting SNS daily (Lenhart, Purcell, Smith and Zickuhr 2010). As Table 1 points out, the most frequently used SNS of the group was Facebook, but other SNS were used as well. Students were compensated with a chance to win a \$100 Visa gift card.

Table 1: Demographic Characteristics

Gender (% male)	Age (years)	Social Network Site most used (# subjects)
50%	19.8	Facebook = 39 Twitter = 11 Linkedin = 11 Google+ = 16 MySpace = 3 Other = 4

Measurements

The survey collected data on several factors impacting self-disclosure behavior. Included in the survey were specific measures of the Big Five questionnaire used to collect information on personality type (McCrae and John 1992). In additions, items were collected on intention to disclose (based on (Davis 1989). Each item was measured on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). All items had good reliability, ranging from (.79 for Conscientiousness to .94 for Agreeableness).

Procedure

Participants were recruited through an email sent to undergraduate students with the incentive being a chance to win a \$100 gift card. Students were given the link to the study URL, which was hosted on Survey Monkey. The survey was not expected to take more than 15 minutes and asked students about their usage of SNS as well as their self-disclosure behavior.

Once students arrived at the site, they were asked to read and agree to a study consent form before moving on to the actual study. After filling out demographic information, students were asked to fill out the survey based on one of the SNS they used. Most students chose Facebook (37), but one chose Google+, another Twitter, and another LinkedIn.

PRELIMINARY RESULTS

As noted above, the preliminary data was collected from 40 subjects and analyzed using Partial Least Squares (PLS) analysis, a SEM technique. This method was selected since it allows for smaller sample sizes to be more accurately analyzed. The means and standard deviations for each item are reported in Table 2. In order to test reliability and validity, several analyses were performed. The first looked at the reliability of each construct. All composite reliability scores were above the recommended cutoff of 0.70 (Hair, Anderson, Tatham and Black 1998). Next, cross loadings were calculated. All items

loaded significantly on their theoretical construct at 0.60 or higher (see Table 3)(Hubona 2009). Convergent and discriminant validity were also evaluated by looking at each construct's AVE and squared root of the AVE (see Table 4). The Average Variance Extracted (AVE) for all constructs is .50 or higher (Fornell and Larcker 1981). Additionally, the square root of the AVE for each construct (see diagonal in Table 4) is an order of magnitude higher than its correlation with any other construct (Hubona 2009).

Turning to the actual model analysis, all of the 'Big Five' personality characteristics (paths) indicated a significant impact on Intention to Self-disclose ($R^2 = 0.54$) (see Figure 1 & Table 5). The effect size is strong at .70 when comparing the impact of only extraversion on Intent to Self-disclose compared to inclusion of all five personality factors. The most significant of which were Extraversion ($\beta = .42$, $p\text{-value} < .001$) and Conscientiousness ($\beta = .45$, $p\text{-value} < .001$). Interestingly, Agreeableness ($\beta = -.17$, $p\text{-value} < .001$) and Openness ($\beta = -.11$, $p\text{-value} < .001$) had an inverse, yet still significant, impact on Intention to Self-disclose than hypothesized. The impact of Neuroticism was also significant ($\beta = -.31$, $p\text{-value} < .001$).

Table 2: Item Descriptive Statistics (n=40)

Variable	Minimum	Maximum	Mean/Median (St. Dev.)	Standard Deviation
CPTA_1	2	7	5.25	1.080
CPTA_2	1	7	3.05	1.797
CPTA_3	1	7	2.48	1.601
CPTC_1	1	7	4.10	1.582
CPTC_2	2	7	5.28	1.281
CPTC_3	3	7	5.28	1.132
CPTES_1	1	7	3.20	1.620
CPTES_2	1	6	3.28	1.432
CPTES_3	1	6	3.05	1.501
CPTI_1	2	7	4.93	1.163
CPTI_2	1	7	4.45	1.535
CPTI_3	1	7	3.85	1.748
CPTII_1	1	6	2.65	1.442
CPTII_2	3	7	5.48	0.987
CPTII_3	1	6	2.65	1.442
ID_1	1	7	4.83	1.781
ID_2	1	7	3.15	1.626
ID_3	1	7	5.53	1.569

Table 3: Cross Loadings

	AGREE	CONSCIENT	EXTRA	INT to DIS	NEUROTIC	OPEN
CPTA_1	0.931	0.090	-0.097	-0.234	0.101	0.408
CPTA_2	0.927	-0.083	0.075	-0.233	-0.011	0.461
CPTA_3	0.880	0.100	0.049	-0.105	0.122	0.299
CPTC_1	0.235	0.602	0.015	0.203	-0.102	-0.037
CPTC_2	-0.145	0.810	0.034	0.463	-0.019	-0.256
CPTC_3	0.107	0.809	-0.058	0.352	-0.094	-0.035
CPTES_1	-0.115	-0.130	0.152	-0.210	0.768	-0.158
CPTES_2	0.138	0.006	0.308	-0.196	0.764	0.243
CPTES_3	0.110	-0.068	-0.034	-0.331	0.908	0.165
CPTI_1	-0.206	-0.054	0.922	0.423	0.056	-0.012
CPTI_2	0.247	0.123	0.750	0.200	0.243	0.142
CPTI_3	0.173	-0.016	0.847	0.218	0.108	0.331
CPTII_1	0.366	-0.118	0.101	-0.152	0.044	0.763
CPTII_2	0.224	-0.187	0.006	-0.179	0.007	0.795

CPTII_3	0.412	-0.098	0.179	-0.206	0.184	0.714
ID_1	-0.299	0.398	0.456	0.925	-0.238	-0.150
ID_2	0.020	0.271	0.372	0.579	-0.004	-0.189
ID_3	-0.201	0.492	0.094	0.883	-0.449	-0.260

Table 4: Constructs Discriminant & Convergent Validity

	CR	AVE	AGREE	CONS	EXTRA	INTENT	NEUR	OPEN
Agreeableness	0.938	0.833	0.913					
Conscientiousness	0.788	0.558	0.023	0.747				
Extraversion	0.879	0.710	0.000	-0.002	0.843			
Intention to Self-disclosure	0.847	0.657	-0.228	0.486	0.368	0.810		
Neuroticism	0.856	0.666	0.064	-0.080	0.132	-0.314	0.816	
Openness to Experiences	0.802	0.575	0.445	-0.177	0.132	-0.240	0.113	0.75

CR = Composite Reliability, AVE = Average Variance Extracted, Squared AVEs are indicated on diagonal in bold.

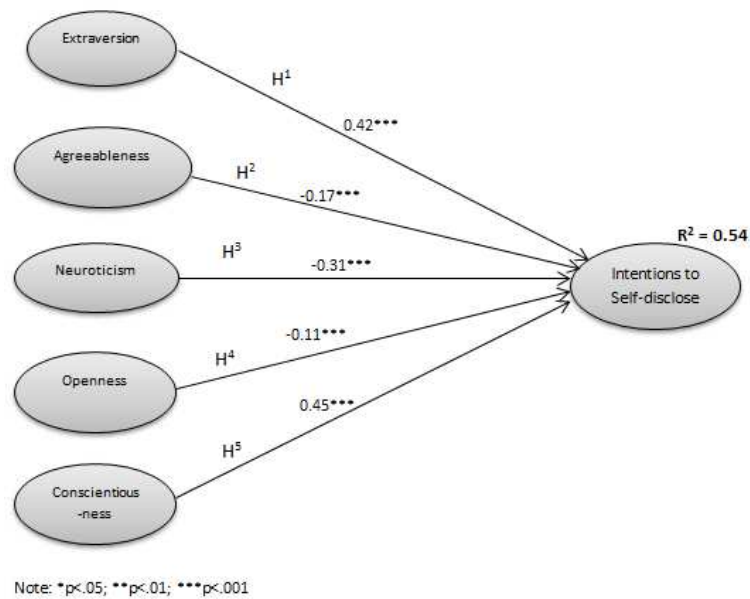


Figure 1: Research Model Results

Table 5: Hypotheses Support

	Supported
H1	Yes
H2	Yes (opposite direction)
H3	Yes
H4	Yes (opposite direction)
H5	Yes

DISCUSSION & FUTURE RESEARCH

The results of the preliminary data are interesting. It is clear that the 'Big Five' impact a person's decision to divulge personal information on SNS. Where previous research has found extraversion to be the primary factor in a person's decision to use a SNS, this research reveals that all personality factors play a critical role in self-disclosure behavior on SNS. Higher levels of extraversion and conscientiousness relate to a higher level of intention to self-disclose personal information. The finding that extraverts intend to divulge more personal information, though intuitive, is interesting given previous research which shows extraverts do not need to promote themselves via SNS as much as introverts given their offline social skills (Amichai-Hamburger and Vinitzky 2010; Zywicki and Danowski 2008).

The other three 'Big Five', Neuroticism, Agreeableness, and Openness to experience, have a negative relationship with intention to self-disclose. People with higher levels of neuroticism had lower intentions of placing personal information on their SNS. This is likely due to their concern for how they are perceived. They may withhold information to better protect their image. Higher levels of Agreeableness and Openness to experience indicated a lower intention to self-disclose. It may be that people with higher levels of agreeableness feel that providing more information about themselves on SNS offers more areas of possible conflict and so withhold some personal information. Additionally, those who possess higher levels of openness to experience are likely involved in many activities and simply feel it is not necessary to disclose a lot of personal information given the time and effort it takes to do so. They may instead choose to put their efforts into other activities.

Additional data will be collected in order to obtain a more adequate sample size for further investigation. Further analyses looking into interactions between the five personality factors may lend greater clarification on self-disclosure behavior. From the preliminary data analysis, however, this research seems promising.

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